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### Claims

1. Payment terminal device (10) for coupling to a point of sale device, a mobile phone (14) and a payment centre (1), wherein the payment terminal device (10) comprises:
  - first interface means (19) for releasably coupling said mobile phone (14) to the payment terminal device (10) to transfer data information between said mobile phone (14) and said payment device (10),
  - second interface means (25) for coupling said payment terminal device (10) and said payment centre (1), to transfer data information between said payment terminal device (10) and said payment centre (1), and
  - data processing means (11) coupled to said first and said second interface means (19, 25) for processing data received from said first and said second interface means (19, 25) and for generating data to be sent to said first and/or said second interface means (19, 25),
  - wherein said first interface means (19) comprise coupling means (20) for coupling said first interface means (19) to said mobile phone (14), for transferring data between said mobile phone (14) and said processing means (11) via said first interface means (19),
  - wherein said first interface means (19) comprises a modem (12) being coupled to said coupling means (20) for converting the data transferred between said mobile phone (14) and said processing means (11) via said first interface means (19),
  - wherein data transferred between said processing means (11) and said mobile phone (14) via said modem (12) are transferred between said modem (12) and said mobile telephone (14) as sound data or acoustic data, and
  - wherein said second interface means (25) comprises means for converting data transferred between second interface device (25) and said payment centre (1) into data being processible by said processing means (11) and said payment centre (1) and vice versa.
2. Payment terminal device according to claim 1, wherein said data transfer between said mobile phone (14) and said payment terminal device (10) is a one-way data transfer.
3. Payment terminal according to claim 1 or 2, wherein said coupling means (20) has an acoustic coupler for transferring sound data or acoustic data between said mobile phone (14) and said payment terminal device.

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4. Payment terminal according to claim 3, wherein the acoustic coupler has a microphone (17) for coupling to a speaker (15) of the mobile phone (14).
5. Payment terminal device according to claim 3, wherein the acoustic coupler has a speaker (18) for coupling to a microphone (16) of the mobile phone (14).
6. Payment terminal device according to claim 4 or 5, wherein a distance between said microphone and said speaker is adjustable in order to adapt said acoustic coupler to different types of mobile phones (14).
7. Payment terminal device of one of the preceding claims, wherein the data processing means (11) comprises at least a communication processor having cryptographic capability.
8. Payment terminal device of one of the preceding claims, wherein the payment terminal device (10) comprises data input means.
9. Payment terminal device of claim 8, wherein the data input means comprises at least one keyboard.
10. Payment terminal device of one of the preceding claims, wherein the payment terminal device comprises a printer.
11. Payment terminal device of one of the preceding claims, wherein the payment terminal device comprises a display.
12. Payment terminal device of one of the preceding claims, wherein the payment terminal device comprises an interface to a vending machine.
13. Point of sale device, e.g. a vending machine with an integrated payment terminal according to anyone of claims 1 to 12.
14. Payment system comprising a payment terminal device, a point of sale device, a payment centre mobile phone and mobile cellular telephone network;  
wherein said mobile phone (14) is connected to said payment centre (1) via said mobile cellular telephone network (5);  
said payment centre (1) and the payment terminal are connected via a second direct

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connection (32); and

wherein data transferred between said payment terminal (11) and said mobile phone (14) are transferred as sound data or acoustic data.

15. Method for performing a payment procedure by using the payment system of the present invention, said method comprises:

- setting up a connection from the mobile phone (14) to the payment centre (1) via the mobile voice network (5);
- identifying the user at the payment centre (1) using the caller identity to establish and decide whether the caller is a registered user of the system;
- putting the mobile telephone (14) onto the acoustic coupler of the coupling means of the payment terminal device (10);
- transferring the required transaction data or payment data from the payment centre (1) via the voice channel established by the mobile telephone (14) to the payment terminal; then
- verifying if the transaction data correspond to the specifications on the user's account by the payment center and approving or rejecting the transaction via the second direct connection (32) between the payment centre (1) and the payment terminal (11).

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